PATENT SPECIFICATION

NO DRAWINGS

Inventor: VACLAR CEPELAK

992,753

992,753

Date of Application and filing Complete Specification May 14, 1962.

No. 18490/62.

Complete Specification Published May 19, 1965

Index at acceptance:—A5 B(2R1, 12B)

Int. Cl.:—A 61 k 3/86

COMPLETE SPECIFICATION

Method of Producing a Haemostatic Preparation

We, SPOFA, SDRUZENI PODNIKU PRO ZDRAVOTNICKOU VYROBU, a Czechoslovakian Body Corporate, of No. 11a, Husinecká, Prague 3, Czechoslovakia, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to a method of producing a haemostatic preparation.

Available methods in medicine for arresting haemorrhage are rather limited at the present time. Whilst certain preparations having thrombin or thromboplastic effects have been relatively effective as haemostatic preparations when applied locally, the haemostatic effects of prearations, which are generally effective as thromboplastic preparations is highly uncertain i experiments and particularly so in clinical tests. The same is true of certain unspecific remedies such as hypertonic sodium chloride solution and others mentioned by F. Heni. (Dtsch. Med, Wacher. 82, 2040, 1957) and used for stimulating haemo- coagulative processes.

Vitamins and substances re-inforcing the wall of a blood vessel from limited observation have a certain value, whilst vasoconstrictive preparations have proved useful in local rather than general application. The therapeutical use of 5- hydroxytryptamine has proved less effective than was first thought. The general use of blood preparation containing increased concentrations of certain coagulation stimulating components has proved relatively expensive and give uncertain results.

Hence practically the sole haemostatic remedy in congenital coagulopathies has up to now been substitution therapy using plasma and fractions thereof. However the haemostatic preparations most generally used are effective only when administered parenterally and substitution therapy in most cases requires that a patient is treated in hospital so that fresh or specially preserved transfusion material can be applied intravenously every day. The remedies used are all expensive, complex and otherwise inconvenient.

Boudreaux in 1960 observed in himself and three other voluteer haemophilic persons a marked improvement in haemostases on eating a large quantity of peanut seeds (Arachis hypogaea L). Boudreaux further observed that the same effect is obtained on consuming the meal obtained by milling defatted peanuts or an ethanol extract of such meal (H. B. Boudreaux & V. L. Frampton, Nature 185, 469, 1960). Boudreaux and other authors have tried to explain the mechanism of this haemostatic activity (H. B. Boudreaux et al, Arch.Bichem. Biophys. 89, 276, 1960; T Astrup et al; Thrombosis et Diathesis Haemorrhagica V, 329, 1960). Clinical experiences of the therapeutic activity of peanuts more recent than that cited is not known at present.

Boudreaux's report of the favourable haemostatic cavity of peanuts has been confirmed in a large number of cases.

The present invention is however based on the surprising discovery that at least an equally favourable haemostatic activity to that of the peanut seed itself is shown by the skinny testa of the peanut seed; that is by the thin brown inner skin of the peanut seed and such an effect is achieved with a substantially smaller dose of skin than of seed. For example, while the effective daily dose of seed varies between about 400g and 500g, skin doses of 7 to 10g, per day are sufficient. Further clinical tests have confirmed that the haemostatic effect of the testa is approximately fifty times greater than that of the same weight of seed.

[*Price 4s. 6d.*]

According to the present invention there is provided a method of producing a haemostatic preparation which method comprises extracting the skinny testa of peanut fruit (Arachis hypogaea L). with water and/or a non-toxic, organic, water-miscible solvent and processing the extract obtained to a medicament form suitable for peroral application.

The extract may be concentrated by evaporation of the solvent and the residue processed to give said medicament form; for example a tincture or powder. The non-toxic organic water miscible solvent is preferably, an alkanol, such as ethanol with 1 to 3 carbon atoms. The skinny testa of both raw and roasted peanuts can be utilized in the method of the invention, without any decrease in the haemostatic effect of the preparation obtained, so that the starting raw material, being a waste product of the food industry, is inexpensive and readily available.

The pharmacological investigation of the ethanolic extract of the peanut testa has shown a low toxicity and harmlessness of the effective principle.

The mechanism of the haemostasis has not yet been unequivocally explained.

On the basis of an ample clinical evidence it can be stated that a preparation, made by the method according to the invention, when administered orally in the form of a tincture in doses of 20 drops four to six times a day, in most cases shows a reliable haemostatic effect, and this effect can be utilized in stopping haemorrhages of most varied origin, especially in haemophiliacs.

EXAMPLE

200g skinny testa, that is the brown inner skin, of peanut (Arachis hypogaea L.) obtained by peeling mildly roasted peanuts, is extracted with 2000g 96%— ethanol at room temperature, for a total period of 96 hours. The mixture is stirred intensively during the first eight hours of each of the four days of the extraction, and then kept quiescent for extraction during the remainder of each day.

The extract thus obtained is freed from peel by filtration, and the filtrate concentrated by evaporation of the ethanol at reduced pressure and moderately elevated temperature. The residue from the evaporation is then, if necessary, diluted with pure 96%— ethanol to give a tincture of total weight 100g. The preparation obtained in this way is effective, as a whole, as a haemostatic for peroral administration in the form of drops in doses of 40 drops each four times per day.

WHAT WE CLAIM IS:—

1) A method of producing a haemostatic preparation which method comprises extracting the skinny testa of peanut fruit (Arachis hypogaea L.) with water and/or a non-toxic organic water miscible solvent and processing the extract obtained to a medicament form suitable for peroral application.

2) A method as claimed in Claim 1 in which the extract is concentrated by evaporation of the solvent and the residue is processed to give said medicament form.

3) A method as claimed in Claim 1 or 2 in which the non-toxic organic water miscible solvent is an alkanol with 1 to 3 carbon atoms.

4) A method as claimed in Claim 3 in which the alkanol is ethanol.

5) A method as claimed in Claim 4 in which the medicament form is a tincture or a powder.

6) A method of producing a haemostatic preparation, said method being as claimed in Claim 1 and substantially as herein described with reference to the Example.

7) A haemostatic preparation when produced by the method claimed in any of the preceding claims.

H. D. FITZPATRICK & CO.,
Chartered Patent Agents,
94, Hope Street, Glasgow, C.2,
—and—
3, Gray's Inn Square, London, W.C.1.

Leamington Spa: Printed for Her Majesty's Stationery Office by the Courier Press.—1965.
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies may be obtained.